

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1, 3 and 21 are rejected under 35 U.S.C. 103(a) over the patent to Adachi.

Claim 2 is rejected under 35 U.S.C. 103(a) over the patent to Adachi in view of the patent to Rich.

At the same time the Examiner indicated that claims 4-9 and 11 were allowed.

The Examiner's indication of the allowance of claims 4-9 and 11 has been gratefully acknowledged. In connection with this indication these claims have been retained as they were.

After carefully considering the Examiner's grounds of other claims over the art, applicants amended claims 1 and 11, the broadest claims on file, to more clearly define the present invention and to distinguish it from the prior art.

Claims 1 and 11, in addition to other features, define that all the winding sides 36 that are inserted into each slot 32 are pressed together into a slot shape 119 in a tool 44 and together plastically reshaped before being inserted into the slot 32 to permanently assume the slot shape 119. These features can be clearly seen, for example, from Figure 6b in connection with Figure 6a.

Turning now to the references and in particular to the patent to Adachi, it can be seen that this reference does not disclose a stator coil assembly 52 with all winding sides which, for insertion into a slot, are pressed together into a slot shape and together plastically reshaped to permanently assume the slot shape. In the winding disclosed in the patent to Adachi the wire portion can be wound for the wire portion in the slot of a tool so that the winding sides are simply arranged in the suitable position, which would not require any additional processing. The patent to Adachi does not disclose the above mentioned new steps of the applicant's invention. A loose winding which has a relatively great gaps between the conductors, in a simplest case can be only one wire per so-called phase winding, and require no deformation in a separate tool for adaptation of the winding sides to a slot shape.

The difference between the method disclosed in the patent

to Adachi and the method in accordance with the present invention can be clearly seen from comparison of Figures 6a and 6b. While in accordance with the patent to Adachi only a relatively loose and not compact arrangement of the winding sides can be provided, in which there is a space between the conductors as represented in Figure 6a, in contrast in accordance with the applicant's invention the corresponding step is further performed so that by the pressing together of the winding sides 36 in a slot shape 119 in a tool and thereby the plastic reshaping of the winding sides together in the slot shape 119, a very tight packing of the winding wires in the slots is possible.

This leads, contrary to a stator iron or a generator in accordance with the patent to Adachi, to a significantly improved conductivity. If Adachi used a stator iron with a winding having a non-pressed, many conductors, then the stator iron during round bending would apply corresponding forces on the winding in the circumferential direction. Between the winding and the teeth, enormous forces would be generated. It has been determined by the research that the teeth of the stator iron no more extend exactly radially inwardly, but instead slightly tilt or bend.

With the pressing in accordance with the present invention it

is possible to prevent that, during round bending very high forces would act between the teeth and the winding sides. Thereby the tilting or bending is prevented.

None of the references discloses such a step for compacting the windings. None of the references provide any hint or suggestion that such a step can be derived from them as a matter of obviousness. It is therefore believed that claim 1 as amended should be considered as patentably distinguishing over the art and should be allowed.

As for claim 21, it is believed that the same arguments presented with respect to claim 1 should be considered as applicable with respect to claim 21 as well, and therefore claim 21 should also be considered as patentably distinguishing over the art and should also be allowed.

The Examiner's statement in the response to arguments that the core winding is preformed into a shape which is generally flat, is correct. However, the winding or its winding sides are deformed as defined now in claims 1 and 21. The reference does not teach that the winding is pressed to assume a flat shape as shown in Figure 3. The winding can be wound phase for phase and slot for slot by a machine, and

required shape can be adjusted so that a further processing of the winding is not needed to bring it in the slots of the stator iron 50. Such arguments represent a hindsight consideration, which is of course can not be presented by the Examiners convincing.

It is therefore respectfully requested to allow claims 1 and 21 together with all the claims currently on file.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,



06/01/2006 13:34 TEL 1 631 549 0404

STRIKER @ STRIKER

→ US PTO

017/017

Michael J. Striker
Attorney for Applicants
Reg. No. 27233

-15-